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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,878	07/20/2005	Sang-Cheon Park	H0595.0025/P025	8387

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EXAMINER

GHATT, DAVE A

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/542,878	<b>Applicant(s)</b> PARK ET AL.	
	<b>Examiner</b> Dave A. Ghatt	<b>Art Unit</b> 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/20/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is rendered indefinite because of the recitation of lines 6-7. It is not clear what is required of the language, "coated on the other surface of said substrate film just by one layer." It is not clear what *other* surface the applicant means. Also it is not clear as to what is required by the language "just by one layer." Because of this indefiniteness, it is not clear what structure the applicant means to claim. The applicant should note that for the purposes of prior art rejections, the examiner has interpreted the requirements of claim 1 to be consistent with the Figure 1 illustration in the applicant's disclosure.

Claim 2 is rendered indefinite because of the recitations of lines 3-10. The subject matter of lines 3-10, e.g. "one or more than one thermofusible ink layer" appears to be double recitations of subject matter already recited in claim 1. Consequently, it is not clear how claim 2 further limits the structure of claim 1. Additionally, the use of the alternative language "or" is confusing, and it appears as though claim 2 requires the structure of, either lines 3-7, or lines 8-10. But this is not clear, especially because of the apparent double recitation of structure already recited in claim 1. Because of this indefiniteness, prior art could not be properly applied to claim

2.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Onishi et al. (US 6,368,684). As shown in Figures 1 and 2, Onishi teaches the claimed thermal transfer ribbon. Figures 1 and 2 teach a substrate film 2, and a heat-resistant layer 4 coated on one surface of the substrate film for preventing thermofusibility between the substrate and a thermal transfer head. See also, column 8 lines 42-45. Figure 2 shows and column 9 line 5 teaches one thermofusible ink layer 6BK. The applicant should note that because of the alternative requirement in claim 1 line 5, and also because of the “if necessary” language of line 8, the above-recited structure of Onishi is all that is required to meet the limitations of claim 1. However, the applicant should note that insofar as structure is recited, Onishi teaches a protective layer 3, illustrated in Figure 2, coated on a surface of the substrate. Column 9 lines 1-9 of Onishi teach one or more sublimable dye layer 5. As outlined in column 17 lines 39-53, protective layer 3 contains luminescence.

With respect to claim 5, insofar as the structure of a protective layer is recited, layer 3 shown in Figure 2 meets the requirements of this claim. As outlined in column 17 lines 39-53, protective layer 3 contains luminescence, because as outlined, the fluorescent substance emits luminescence.

With respect to claim 6, Onishi teaches the claimed requirement. Column 18 lines 23-44 teach the fluorescent substance (which includes luminescence) is preferably 15 to 80% by weight, preferably 20 to 50% by weight, which falls within the claimed range.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onishi et al. (US 6,368,684) in view of Sato (JP 2001322360 A). As outlined in the above rejection to claim 1, Onishi teaches all the claimed subject matter, including thermofusible layer 6BK. However, Onishi does not teach the thermofusible layer containing luminescence, invisible fluorescence or a mixture thereof. Sato teaches a thermal transfer ribbon similar to that of Onishi. As outlined in the translated abstract, Sato teaches a heat fusible ink layer formed on a base layer similar to that of Onishi. Sato further teaches a colorless fluorescent agent formed on the heat fusible ink layer. In view of this teaching, to one of ordinary skill in the art, it would have been obvious to include an invisible fluorescent agent on the heat fusible layer of Onishi, for the benefit of improving the printing quality, with respect to fluorescence, as taught in the translated abstract of Sato.

With respect to claim 4, and the range requirement for weight, column 18 lines 23-44 of the primary reference teach a similar range for a fluorescent substance (which may or may not be

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invisible). However, in view of this teaching, to one of ordinary skill in the art, it would have been obvious to provide the recited percentage weight, in order to improve the quality of the printed product.

### *Conclusion*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave A. Ghatt whose telephone number is (571) 272-2165. The examiner can normally be reached on Mondays through Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAG



Daniel J. Colilla  
Primary Examiner  
Art Unit 2854